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ABSTRACT

The phenomenal growth in enrollments in occupational courses since the early Sixties signals a new direction for the community college movement. From a predominantly baccalaureate-oriented institution the community college has become an occupational-oriented institution. The statistics on the college, state, and national level attest to this phenomenon. Until the Sixties enrollments in the vocational and technical courses ranked a low second to enrollments in the transfer courses. Today, it is not unusual to find colleges, even entire state systems, whose occupational enrollments exceed transfer enrollments. It is too early for obsequies over the transfer function but the evidence indicates that occupational education is becoming the community college's major function in terms of credit enrollment. For the next five years enrollments in vocational education will at least equal enrollments in transfer education, a realistic balance in terms of the aptitude and economic status of students and the differentiation of functions among higher education institutions. Enrollments in both of them however may be lower than enrollments in community, adult and developmental education. The danger to the transfer function lies more in the growth of the community education movement than in the growth of occupational education. (Author/LH)

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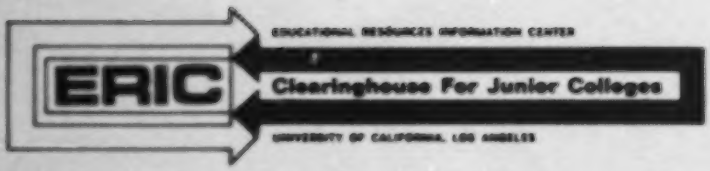

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RESURGENCE OF OCCUPATIONAL EDUCATION

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RESURGENCE OF OCCUPATIONAL EDUCATION

by

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RESURGENCE OF OCCUPATIONAL EDUCATION

John Lombardi

Introduction

The phenomenal growth in enrollments in occupational courses since the early Sixties signals a new direction for the community college movement. From a predominantly baccalaureate-oriented institution the community college has become an occupational-oriented institution. Whereas before the 1970s occupational education advocates bemoaned the emphasis on the transfer function, today it is the educators in the transfer sector who are watching helplessly while their courses and programs are being scuttled to make way for career education courses and programs.

The statistics on the college, state, and national level attest to this phenomenon. Until the Sixties enrollments in the vocational and technical courses ranked a low second to enrollments in the transfer courses. Today, it is not unusual to find colleges, even entire state systems, whose occupational enrollments exceed transfer enrollments. It is too early for obsequies over the transfer function but the evidence indicates that occupational education is becoming the community college's major function in terms of credit enrollment. If this trend continues it will mark the fulfillment of the hopes of the junior college leaders who have maintained that occupational education should be the primary mission of the community college.

As remarkable as this metamorphosis appears it is no more remarkable than that the process took more than half a century, since at no time did community college leaders place the transfer function above the occupational function. In their speeches, writings, official publications, the major theme has always been that occupational education "is...the most significant aspect of the rapidly spreading junior college movement" (Eells, 1941b, p. vi).

This theme dominated the activities of their national organization,

the American Association of Junior Colleges. At annual conferences and in official publications vocational education received major attention. In 1939 the Association's Commission on Terminal Education conducted a four-year study funded by the General Education Board, a study which still ranks as one of the most extensive on terminal (vocational) education. Three volumes covering The Literature of Junior College Terminal Education, Present Status of Junior College Terminal Education, and Why Junior College Terminal Education? were written, edited and/or compiled by the Executive Secretary of the Association, Walter Crosby Eells (Engleman and Eells, 1941; Eells, 1941a, 1941b). While terminal education is featured in the title of the three monographs there is never any doubt that the Commission's objective was to further the cause of terminal occupational education. The Commission also prepared a Statement of Fundamental Principles that is as vital today as it was in 1940. According to the framers of the Principles "the junior college...essentially a community institution... has a special obligation to meet fully the needs of its own constituency,... [and since] the junior college marks the completion of formal education for a large and increasing proportion of young people...it should offer curricula designed to develop economic, social, civic, and personal competence." To meet this responsibility they dedicated their efforts "to aid junior colleges to formulate suggested curricula which...will meet the educational needs of youth who will complete their formal education in the junior college" (Eells, 1941b, p. 1).

The Commission's reports record the contributions the early leaders made on behalf of occupational education. Specifically, they defined occupational education; emphasized its right to be considered collegiate education; solicited support from community leaders, legislators, governors and presidents; created curricula comparable to those in the transfer category; and provided an associate in arts degree for graduates of the program. They equated vocational education with the welfare of society.

This legacy did not produce immediate benefits; probably because it was attempting to change a concept of collegiate education that was too firmly established. For to the large majority of students going to college meant working for a baccalaureate. However, educators never gave up the concept that occupational education was a legitimate collegiate function of the two-year college; although surprisingly, very few would go so far as to give it equal status with transfer education. The emphasis on the terminal character of occupational education was its most serious handicap.

Another factor that handicapped the growth of occupational programs was the small size of the average college. Although the number of public colleges and enrollment increased at phenomenal rates, the average number of students in a college remained below 1,000 until 1946. If California colleges were not included the average would be considerably lower. Colleges with low enrollments could not offer many occupational courses. Costs would be prohibitive.

Eells (1941a) reported a direct relationship between size and enrollments--the small colleges (up to 99 students) had 10 percent in terminal curricula; the medium colleges (100-499 students) 32 percent; the large colleges (500-999) 34 percent; and the very large colleges (1,000 and over) 38 percent. By region the Middle States colleges had 22 percent, the North Central and Southern each had 30 percent and the Western (California) had 50 percent. No public junior colleges were reported for New England.

Eells (1941a) also pointed out (what has become a refrain of the advocates of occupational education) that while 77 percent of freshmen did not continue their education beyond the sophomore year only 35 percent of the regular students were enrolled in terminal curricula. Still another factor that worked against the introduction of occupational courses was the association of some junior colleges with the high schools. In these colleges the administrators favored the academic courses because they were more attractive to the senior high school students than vocational courses, they entailed no new facilities or equipment,

they could be combined with fourth year high school courses if enrollments were small, and they would not require the hiring of more teachers.

Enrollment statistics confirmed the preference of students and probably a large segment of the professional staff for transfer education. From 1917 when McDowell reported that 18 percent of the offerings in public junior colleges were vocational, similar reports followed at frequent intervals. The percentage of offerings never rose beyond a high of 35 percent (Eells, 1941a).

Enrollments were even more discouraging; they rarely exceeded 25 percent. In 1930 Christensen found that catalog listings in occupational offerings represented one-third of the total curriculum but enrollments were only 20 percent (Bogue, 1950). Eells (1941a) reported 35 percent in terminal curricula in 1938 but when students enrolled in non-vocational terminal curricula are excluded the percentage drops to less than 25.

These statistics were disappointing to the leaders. Eells who was one of the strongest proponents of terminal education and ordinarily optimistic about its future admitted that "recognition of the terminal function...existed more as aspiration in the minds of administrators than as realization in the experience of students and parents" (1941a, p. 18). Earlier, Kemp in 1927 observed that in vocational education California colleges had "done no more than make initial gestures" (Eells, 1941a, p. 21). By 1930 only 16 percent of the California junior college students enrolled in vocational curricula.

The situation following World War II was no better, perhaps a little worse, than before the War. It seems as if the efforts of the Commission on Terminal Education had no effect. The multiplication of junior colleges and the large increase in total enrollment were not reflected in vocational enrollment.

As in the early period vocational education advocates continued to press for more vocational curricula and courses and for greater efforts to encourage students to enroll in them. Indicative of this stress on occupational education is the amount of space accorded to it

in official publications. For example, in the second edition of American Junior Colleges (1948) in the chapter on the Development of the Junior College Movement, Phebe Ward devoted 12 lines to the preparatory function but more than a page and one-half to the status of technical (occupational) education. She observed that "despite the growing interest in and the overwhelming need for terminal education...the development of these courses generally has been very slow" (Ward, 1948, p. 15). In fact, she felt it safe to generalize "that effective terminal courses have never been offered in sufficient numbers to meet the need for them--that is, terminal courses which provide education both for an occupation and for personal adequacy" (Ward, 1948, p. 14).

In their evaluation of terminal curricula Starrak and Hughes wrote in 1948:

> "One might infer from the numerical data...that there exists an extensive and vigorous development of terminal curricula in our junior colleges. The fact is, however, that many of these data are misleading. In many instances they seem to have been obtained by an analysis of junior college catalogs. Close students of the actual situation tell a somewhat different story. They have a strong suspicion that many of the terminal curricula reported are composed of the same old traditional subjects simply regrouped in a more functional order, but without any fundamental changes in objectives or content. As such, they are quite inadequate to serve the needs of terminal students" (1948, p. 33).

They quote Hollinshead as being unimpressed with most junior college terminal courses which are "largely traditional and nonfunctional." The sad part of this situation, he added, was that junior colleges "would begin to occupy one of the most important places in American education [if they] would offer courses close to the interest of the student, and suited to his abilities...instead of trying to imitate the four-year programs" (Starrak and Hughes, 1948, pp. 33-34).

Two years later, Bogue, Executive Secretary of the American Association of Junior Colleges pleaded: "Community colleges must strike

out boldly, demonstrate that they are not bound by tradition or the desire to ape senior colleges for the sake of a totally false notion of academic respectability." He warned the educators that unless they acted the legislatures would follow Texas's example of setting a minimum of "40 percent of programs...in so-called terminal fields,...[to] qualify for state aid" (1950, p. 313).

As late as 1960 Venn pointed out that only one-fourth of community college students were enrolled in occupational programs with half of them in California and New York and another 20 percent in Illinois, Michigan and Pennsylvania (Monroe, 1972). After analyzing the occupational offerings in 511 public junior colleges in 1967 Smith reported that though there was "considerable variety in occupational offerings, the number and percentage of such offerings are found in only one-third or less of the public junior colleges" ([1969], p. 4). He concluded that "the public junior college accords transfer education continued emphasis, and though the number of different occupational offerings has increased, the number of junior colleges offering occupational curricula has not increased substantially" ([1969], p. 7).

It is refreshing to find a critic who was able to report more dispassionately on the issue. Medsker counseled two-year college educators to:

> "Recognize the comparatively light emphasis of the institutions as a whole on the terminal function and the heavy emphasis on the transfer programs. If by its own practices this institution is not really unique in serving a terminal function, no attempt should be made to convince the public that it is different from the four-year college in this respect. Likewise, those who are not connected with the junior college but look at it in theoretical terms should examine its record more closely; they should not be too quick to condemn the two-year college for not emphasizing the terminal function but rather should consider the societal and cultural values that account in part for the situation" (1960, pp. 116-117).

Though enrollments were not as high as critics thought they should be, two-year college educators were not as indifferent to occupational

education as was claimed nor had they neglected this area. If they had been indifferent or neglectful they would not have been able to accommodate the large numbers that began to enroll in occupational courses in the middle Sixties. Rather, a case can be made that, at least since World War II, two-year college administrators have devoted as much or more time and energy on occupational education than on transfer education. For one thing, they had few four-year college patterns to imitate in occupational education. For another, they could point out that the number of students enrolled in occupational programs did not decrease, which in itself was notable in an era when a baccalaureate education was held in as high esteem as ever in American history.

Despite the disappointing low enrollments in occupational programs, a great deal of progress was made in establishing them as an important part of the junior college curriculum, in developing two- and one-year programs, in publicizing their worthiness, in stressing that semiprofessional education was no less collegiate than transfer education. Symbolical is the AA degree for semiprofessional and occupational graduates.

The Turning Point

The turning point for vocational education came sometime during the middle Sixties. Not only did occupational enrollment increase in numbers but it increased at a higher rate than either total enrollment or transfer enrollment. There is no question about the durability of the phenomenon. No matter what the unit of measurement--first-time freshman enrollment, headcount, full-time equivalent (FTE), student credit hours, majors, graduates, faculty--the steep upward movement is unmistakable.

Before presenting the data documenting this phenomenal curriculum reorientation of the public two-year colleges a few observations are in order.

Although the terms "occupational" and "transfer" commonly represent

the two most important curriculum functions of the two-year colleges they are not universally used in state and college reports. Other terms more or less synonymous, are current. In general these terms are:

a. Transfer--liberal arts, baccalaureate-oriented, college or university parallel, pre-professional, academic, professional, and advanced;

b. Occupational--technical, vocational, career, occupational extension, supplementary vocational, apprenticeship.

The dynamics of the community college situation are creating cross-currents that seem to be veering the institution in still other directions. The simple curriculum enrollment dichotomy of transfer and occupational education is enlarging to a complex of categories. These new enrollment categories, have not only become significant in the total enrollment but, as a group they are matching or exceeding enrollments in the traditional transfer and occupational. The composition of this group varies from state to state. In Florida the group includes: undecided, developmental, community instructional service, other personal objectives; in Illinois: undeclared, general studies, remedial/development, vocational skills; and in Oregon: other reimbursable, nonreimbursable and separate contract further defined as self-improvement or complementary courses to other approved courses/programs. Although it is recognized that this category includes transfer and occupational students, there is no way except by a survey of the students or an analysis of the original data to determine the numbers who are transfer or occupational. A Joint Legislative Commission in Virginia which did make a student survey in 1975 "revealed that a substantial number of students, reported as unclassified, could reasonably be placed in one of the three principal programs... university parallel,...occupational-technical...[and] developmental" (Virginia State General Assembly, 1975, p. 4). Thus, the 45 percent of "Unclassified" reported by the State agency declined to 11 percent; the University Parallel increased from 18 percent to 33 percent; the Occupational/Technical increased from 30 percent to 51 percent; the Developmental dropped to 5 percent from 7 percent. In 1975

unclassified students in Hawaii took 32 percent of their work in occupational education courses and 68 percent in general education courses. In 1971 the comparable percentages were 29 and 71 (University of Hawaii, 1975a). Of the 12,110 Iowa students enrolled in general adult education for 1975-76, 6,760 or more than half were in career education programs and only 200 in college-level programs (Iowa State Department of Public Instruction, [1976]).

The 1976 and 1977 Directory of Community, Junior, and Technical Colleges contain a new category "community education enrollment, defined as the total number of people participating in noncredit activities sponsored by a college" (American Association of Community and Junior Colleges, 1976, p. 3). The size of this group is approaching that of the traditional credit enrollment. Almost one and a third million were reported for October 1975 (American Association of Community and Junior Colleges, 1976). The next year 3.2 million were reported for 1975-76 (American Association of Community and Junior Colleges, 1977). The traditional credit enrollment for October 1975 was 3.92 million; for October 1976 it was 3.94 million. Community education enrollment, which may include some occupational students, is usually separated from the three curriculum or credit enrollment categories: occupational, transfer, undeclared. As a rule, states do not report community education participants. An exception is Illinois which yearly reports "Participants in Community Education and Community Services Offerings." The number has increased from 26,225 in the Fall of 1972 to 218,000 (estimated) in the Fall of 1976 (Illinois Community College Board, 1976c).

Because of the increase of the other undeclared category the proportion of occupational and transfer to the total enrollment has declined. In Illinois for example, occupational and transfer comprised 82 percent of headcount enrollment in the Fall of 1968; 67 percent in the Fall of 1976 (Illinois Community College Board, 1976b). In Oregon the comparable unduplicated headcount percentages were 70 for 1968-69 and 56 for 1975-76.

Although the rate of increase for occupational enrollment has usually been higher than for transfer enrollment, the actual transfer enrollment has also increased substantially over the period 1968-1976. Again using Illinois and Oregon as illustrations the transfer enrollments for the same periods were respectively, 49,720 and 107,000 for Illinois; 22,700 and 40,800 for Oregon (Table 1). In some years during the period declines did occur; in Illinois, from 77,400 in 1971 to 67,460 in 1972, by less than one percent in 1976 from a high of 108,000 in 1975 (Illinois Community College Board, 1976b); in Oregon by 15 in 1972-73 and by 426 in 1975-76 (Oregon State Department of Education, 1977).

National data may include independent, as well as, public college enrollment. State and college data are exclusively public college enrollment.

National Enrollment

Despite variations in estimates of the national enrollment in occupational courses they do show consistency in the upward trend. The estimates vary from one-third to more than one-half. The Bureau of Labor Statistics reported in 1968 that 40 percent of all full-time and part-time students in two-year colleges were enrolled in career training programs up from 34 percent in 1964 (Bushnell, 1973). Monroe in his Profile of the Community College estimated that in 1972 one-third of all community college students were enrolled in occupational courses. Parker's yearly surveys of selected two-year institutions report that more than half of the students enrolled in basically career programs--58 percent in 1973-74; 57 percent in 1974-75 (Parker, 1974a). Parker also noted that "the thrust toward technical education continued its vigorous upward motion in 1974-75" (Parker, 1975, p. 6).

The increase in federally-supported programs was phenomenal, from 171 thousand in 1964 to almost 1.6 million in 1974. In 1964 the postsecondary institutions accounted for 3.7 percent of all enrollments in such programs; in 1974, 11.6 percent (U.S. Department of Health, Education and Welfare, 1975).

TABLE 1
OCCUPATIONAL AND TRANSFER ENROLLMENTS
AS A PERCENT OF THE TOTAL ENROLLMENT

State	Year	Total	Occupat	% Total	Transfer	% Total
Florida[a,b]		Headcount				
	1970-71	107,630	25,980	24	78,940	73
	1975-76	169,790	47,400	28	105,280	62
Hawaii[c,d]		Headcount				
	1969	8,200	3,660	45	3,170	39
	1976	20,880	9,090	44	9,980	48
Illinois[e]		Headcount				
	1968	89,530	23,450	26	49,750	56
	1976	325,830	108,330	33	107,050	33
Iowa[f]		FTE				
	1968-69	21,440	7,860	37	9,790	46
	1975-76	43,770	21,080	48	10,580	24
Massachusetts[g]		Headcount				
	1967	11,620	5,090	44	5,360	46
	1974	28,110	16,540	59	9,000	32
Mississippi[h]		Headcount				
	1972-73	33,420	10,150	30	16,230	49
	1975-76	45,750	14,980	33	20,400	45
Nevada[i]		FTE				
	1972	1,430	800	56	480	34
	1976	4,980	2,130	43	2,150	43
Oregon[j]		Unduplicated Headcount				
	1968-69	80,940	33,860	42	22,740	28
	1975-76	201,770	72,020	36	40,760	20
Washington[k]		FTE Fall Quarter				
	1967	42,120	11,260	27	28,830	68
	1974	80,200	37,650	47	41,940	52

Sources:
[a] Florida State Department of Education, 1972, p. 39.
[b] Florida State Department of Education, 1977, p. 28.
[c] University of Hawaii, 1974.
[d] University of Hawaii, 1976, p. 9.
[e] Illinois Community College Board, 1976b, p. 5.
[f] Iowa State Department of Public Instruction, [1976], p. 12.
[g] Matrix for Planning, 1975, p. 39.
[h] Mississippi State Department of Education, 1975, p. 2.
[i] Donnelly, 1977.
[j] Oregon State Department of Education, 1977, p. 5.
[k] Washington State Board for Community College Education, 1975, Table 14.

State Enrollment

Data from state reports (Table 1) for the period since the middle 1960s show that the rise in occupational enrollment more than kept pace with the large rise in total enrollment and in most states outstripped the rise in transfer enrollment. The data show for each of the states the total, occupational and transfer enrollments for designated years and the percent of occupational and transfer enrollment to the total enrollment for each of the years.

A word of caution is necessary in interpreting the data in Table 1. Because enrollment statistics are not reported uniformly those in Table 1 are intended to show only the trend in the individual state for the period indicated. As is evident the unit of measurement-headcount, unduplicated headcount, full-time equivalent (FTE) varies. Also, some are opening fall enrollments; others fiscal year enrollments. And the states differ in classification of students and in the kind of student enrollment reported.

In 6 of 9 states listed in Table 1 occupational enrollment as a percent of total enrollment increased while transfer enrollment as a percent of total enrollment decreased. In Oregon both occupational and transfer enrollment declined--the former from 42 to 36, the latter from 28 to 20. This decline probably reflected the stricter accounting practice in reporting reimbursable and nonreimbursable programs. In Hawaii, the higher growth for transfer is partly attributable to the change from vocationally oriented schools (four of the seven Hawaiian colleges were originally vocational technical schools) to comprehensive community colleges (Lombardi, 1975). Nevada started its community college system in 1971 with a goal of 60 percent enrollment in occupational education, a goal that was attained only in 1972. Since then the proportion has been lower in each year--54 percent in 1974, 50 percent in 1975, 43 percent in 1976 while the transfer enrollment increased to 33 percent, 38 percent, 43 percent respectively (Donnelly, 1977).

Data from other states not included in Table 1 while not as

complete are supportive of the trend toward occupational education. For example, enrollment in occupational programs in California jumped by 38 percent in 1970-71 over 1969-70, stayed within a 6 to 7 percent range until 1974-75 when enrollment rose by 20 percent. The 1975-76 rate dropped to 3 percent (Eissler, 1977). During the 1976-77 fiscal year "three-fifths of all...enrollees pursued some occupational training goal" (California Community Colleges, 1977, p. 2). Nearly 40 percent of the ADA (average daily attendance) was generated in vocational education classes. In 1968 47 percent of the North Carolina students enrolled in technical programs, 29 percent in vocational and 24 percent in college transfer; in 1974 enrollment in technical programs increased to 57 percent, while enrollments in vocational and transfer each fell by 5 percent (Shearon and Others, 1976). The North Carolina statistics include enrollment in the technical institutes whose transfer enrollment is miniscule. In 1975 occupational enrollment in Virginia represented approximately 51 percent of the total (Virginia State General Assembly, 1975).

College Enrollments

College reports confirm the shift from the transfer to the vocational programs. In a five-year study 1970-1974 of day class enrollments at Los Angeles City College, Gold found that enrollments increased in 12 of 17 career departments whereas enrollments increased in only 6 of 15 noncareer departments (Gold, 1975). For the 9 colleges of the Los Angeles Community College District (1977) 65 percent of the 137,000 students enrolled in 1975 were classified as vocational up from 50 percent in 1969. In a report from Prince George's Community College in Maryland for the 1969-1973 period, enrollments in career programs grew from 747 in Fall 1969 to 2,557 in Fall 1973, representing a 242 percent gain in contrast to a 79 percent growth rate for the total enrollment (Larkin, 1974b). Prince George's graduations by program type showed a similar pattern--the 57 graduates of career programs represented 19 percent of the 302 graduates in 1970; the

395 career program graduates in 1974 represented 49 percent of the 807 graduates (Larkin, 1974a).

A 1973 report of the Macomb County Community College in Michigan noted: "The shift to occupational education continues. Over 46 percent of the students, by headcount, were in occupational programs during the 1972-73 school year compared to about 44 percent during the 1971-72 school year." Credit hours in occupational credit courses increased from 35 percent of the total in the Fall of 1971 to 44 percent of the total in Spring of 1973 (Macomb County Community College, 1973, p. 1).

Faculty Employment

The enrollment rise is also reflected in employment of occupational instructors. Phair's survey of new staff and faculty hired in the Fall of 1976 by California colleges showed that "the academic and liberal arts areas continued to be depressed" while the occupational areas were flourishing. "The para-professional, occupational, and vocational/technical training programs, especially in the industrial trades, employed sizable numbers of new staff," approximately 25 percent of the total (Phair, 1977, p. 3). In Illinois, in 1967 instructors with less than a bachelor's degree (primarily occupational instructors) comprised about 4 percent of the full- and part-time faculty (Anderson and Spencer, 1968); in 1970 they comprised 9.7 percent (Illinois Junior College Board, 1971).

Causes of Rise

This spectacular development in occupational education is attributable to many causes. We have already mentioned the legacy left by the leaders of the junior college movement. Without the foundations they laid the community colleges would not have been equipped to undertake the great expansion of the late Sixties and the early Seventies. Not to be overlooked are the importunities, goadings, sometimes barbs of the early and later leaders to prod community colleges to develop occupational curricula and courses.

Among the other causes for the rise in occupational enrollment are: the Vocational Education Act of 1963 and the 1968 Amendments; the large increase in the number and size of public two-year colleges; the Career Education Movement; changing economic conditions, particularly the high unemployment among four-year college and university graduates; the increase in part-time, women, disadvantaged, handicapped and older students; the upgrading of institutions and the transfer to or the absorption by the two-year colleges of adult education programs and post-secondary occupational programs formerly operated by the secondary schools.

The Vocational Education Act of 1963 and the Amendments of 1968 broadened the criterion for federal aid from the less-than-college level of the Smith-Hughes Act of 1917 to college-level courses that do not "prepare individuals for employment in occupations...generally considered professional, or which requires a baccalaureate, or higher degree" (Davenport and Others, 1976, p. 18). Along with the new criterion Congress appropriated funds generously: $42.9 million in 1968, $707 million in 1972 and $981 million in 1974 (Davenport and Others, 1976). In addition, Congress earmarked additional funds for vocational programs for the disadvantaged and handicapped.

State and local allotments for occupational education more than matched the federal appropriations. For every federal dollar appropriated state governments and local districts provided more than three dollars in 1968, almost five dollars in 1972, and more than six dollars in 1974 (Davenport and Others, 1976). In general, per capita grants to colleges are larger for occupational courses than for liberal arts courses.

These funds came at a time when colleges were increasing in number and size--a condition which, as Eells pointed out, is conducive to the growth of occupational courses and curricula. Between 1960 and 1965 the number of public two-year institutions increased from 405 to 503 and enrollments rose from 566 thousand to more than one million. By 1969 the comparable figures were 794 and two million.

Four years later the colleges numbered 933 and enrollment exceeded three million (Drake, 1976).

As enrollment increased so did the occupational curricula and programs. In Illinois where "many of the [new] districts were formed on the promise to the electorate of having upwards of fifty percent of the programs in vocational and technical education" (Dobrovolny and Stark, 1975, p. 2), the number of curricula in 1975 was 1,871 or 66 percent of all curricula (Illinois Community College Board, 1976a). In Florida associate degree and certificate occupational programs exceeded 900 (Florida State Department of Education, 1977). The number of different curricula in states with many colleges exceed 200; the small Hawaii system of colleges offers approximately 80 different day programs (Career Information Center, [1974]).

In the early 1970s the concept of career education enunicated by Commissioner of Education, Sidney P. Marland, Jr. aroused a great deal of favorable sentiment toward occupational education. As with the terminal education rubric of the 1930s career education is not synonymous with occupational education, but it is very closely associated with it. Much of its appeal rests on its premise that all education is directed toward a job whether a trade, a craft, a semiprofession or a profession. The distinction between vocational and academic becomes less important to the individual as he seeks the career suitable to his needs, abilities and preferences. An important aspect of career education is the promise of reentry to the educational system at any time an individual finds it necessary, either for upgrading an old skill or learning a new one.

Directly and indirectly the relatively high unemployment among four-year college and university graduates has helped occupational education and has undermined or at least raised doubts about the long-held assumption that a baccalaureate or higher degree is certain to lead to a high paying job (Trivett, 1977). In the mid-1970s, according to Freeman: "For the graduates of the mid-1970s, falling salaries, scarce job opportunities, and dwindling career prospects

are the new reality" (1976, p. 31). At the same time wages in the blue collar industries have been increasing at a high rate, in some jobs at a higher rate than white collar and professional jobs. Both of these developments have made occupational education more appealing to community college students and they have caused some of the unemployed senior college graduates to turn to the community college to learn a skill to tide them over until the professional job situation improves. How many of the latter are enrolling is not known, probably not as many as claimed. The significance of this economic dislocation insofar as it affects the acceptability of occupational education lies in the reexamination of the thesis that a senior college education assures a greater earning capacity than a two-year occupational education (Lee, 1976; Bethune, 1977).

The growth in part-time, women, disadvantaged, handicapped and older students has contributed to the rise in vocational enrollments. Bushnell points out in his study that while 40 percent of all full- and part-time students enrolled in career-training programs only 25 percent of full-time students did so. The proportion of women who chose career programs was 35 percent, while among men it was only 17 percent (Bushnell, 1973). Disadvantaged and handicapped students are encouraged to enroll in occupational programs through special grants. State and local college reports indicate that adults desire occupationally-related courses. The large occupational enrollments in California, Florida, Iowa, North Carolina and Oregon consist largely of older, part-time students. (See for example An Analysis of LACCD Enrollment Trends by Los Angeles Community College District, 1977.)

Some of the large increases are the result of the upgrading of institutions or the transfer to the community colleges of functions formerly performed by other segments of education--the secondary and adult schools, technical institutes and area vocational schools or centers. This has been most marked in Florida, where 14 of the 28 community colleges have a department designated as an area vocational

education school and others have cooperative agreements with school boards which operate area vocational-technical centers; in Iowa where all of the public community colleges are merged with area schools; in Nebraska where the state is divided into technical community college areas; and in North Carolina where the technical institutes are part of the community college system (Lombardi, 1975). In some states (California, for example) community colleges have expanded their occupational offerings with and without formal agreements with other institutions. Because they were or are still associated legally with the public school system such community college districts as Long Beach, San Diego, and San Francisco offer nearly all of the occupational education in their areas. Similarly, in Chicago all of the adult and vocational education programs were transferred by the city to the community college system (Lombardi, 1977).

The combination of these forces has counteracted to a considerable degree those open and subtle forces that caused students, their parents, and society to place the baccalaureate over the occupational programs. In its Statewide Master Plan for 1978 to 1987 the Maryland State Board for Community Colleges reported that the "increasing emphasis on occupational programs reflects changing values and attitudes among students and their families as to the level of education required to qualify for desirable employment opportunities. This shift is reflected in national projections predicting that throughout the next decade 80 percent of available jobs will require less than the bachelor's degree" (Maryland State Board for Community Colleges, 1977, p. 34).

The popularity of occupational programs has led to competition among colleges in all segments of post-secondary education--public, independent and proprietary. No longer are community college educators being prodded to develop more occupational programs. The emphasis today is on coordination to prevent proliferation and duplication. Paradoxically, state coordinating agencies are being empowered to keep institutions from establishing unnecessary or duplicating programs

and to require them to discontinue obsolete or weak programs while state funding patterns and federal grants continue to encourage the establishment of more programs. Another outcome is the muting of the charge that occupational education is a subtle form of tracking and part of the cooling-out or filtering-out process designed to keep the poor, the disadvantaged, the low aptitude out of the transfer and baccalaureate programs.

Reliability of Data

Questions have been raised about the data regarding occupational courses and students. Some observers believe that the premium on vocational education in terms of higher funding patterns encourages colleges to classify as vocational programs that in the past were classified as general education or liberal arts. Some distortion may occur as a result of the great stress on occupational education. In order to show high enrollment in occupational programs educators may classify as occupational students those who take at least one occupational course, whether majoring in an occupational or liberal arts transfer program. However, distortions that may occur as the result of the high favor, financial incentives and pressures to encourage enrollments in occupational courses and programs are evened out in the longitudinal data covering the period since the middle 1960s. Enrollments are also affected by the addition (or deletion) of institutions and by the transfer of functions from or to other segments of education.

Vocational education leaders conscious of the criticisms relating to the statistics are refining their data collection. In addition to the U.S. Office of Educational Vocational Education Classification states have their own definitions. California, for example, has developed a Student Accountability Model (SAM) for the "uniform method for classifying occupational courses and identifying occupational majors" (Gold and Morris, 1977, Preface). Under the SAM guidelines an occupational course is defined as one which is (all

three):

(1) intended to develop skills and related knowledge needed for job performance.

(2) part of the course sequence of an occupational program offered by the college.

(3) designed primarily for job preparation and/or job upgrading or updating and not for general education purposes.

Prior to each semester, the occupational administrator (or his delegate) should examine all courses offered by occupational departments, number each with an appropriate CID (Classification of Instructional Disciplines) or USOE number (U.S. Office of Educational Vocational Education Classification), and follow (or precede) the number with a priority letter as follows:

A. Apprenticeship

B. Advanced occupational

C. Clearly occupational

D. Possibly occupational

E. Non-occupational

(Gold and Morris, 1977, p. 6).

As a result of a similar redefinition of classifications of courses by a Washington committee of deans of instruction working with the staff of the State Board for Community College Education the academic increased by 4 percent and the vocational decreased by 4 percent (Price, 1977).

Another criticism relates to the reliability of statistics on majors, especially as made by entering students. Again, there is some validity to the criticism. However, here the statements can be compared with the volume of student credit hours in the various categories and the degrees awarded. Where available the evidence confirms the upward trend of vocational enrollments.

Concerns

As a result of the enrollment surge occupational educators are becoming less defensive about their place in higher education. Their

number has increased and more of them are being appointed to administrative positions, mostly in vocational areas, but occasionally in positions involving supervision in academic areas. Upgrading of instructors, started in the 1950s, supported by the enlarged appropriations that make possible staff development programs, and encouraged by salary schedules that provide incentives for academic degrees, is partly responsible for the greater confidence and assurance displayed by occupational instructors. Many of them have acquired bachelor's and master's degrees, removing one of the most potent symbols of inferiority in the academic community.

All these factors--employment surge, staff upgrading, and financial support from business, industry and government--have given occupational educators a buoyancy that shows up in new courses, programs, teaching strategies. Many occupational educators are euphoric, with a self-assurance sometimes tinged with smugness, if not arrogance. The slower enrollment growth rate of recent years they consider a temporary pause. They have a large reservoir of funds, mostly public but some private and foundation, to undertake studies and sophisticated research on every conceivable aspect of occupational education: preparation of model courses and programs; student profiles; follow-up of graduates; needs assessments; guidelines for choosing new courses and curricula; criteria for weeding out the obsolescent and the weak courses and programs or for bolstering and upgrading others to conform to new developments in job specifications.

They have flexed their newfound power in several ways. Under the aegis of the American Association of Community and Junior Colleges they have organized a Council of Occupational Education "to promote interest and concern in occupational education and foster cooperation among educational organizations" (Milwaukee Area Technical College, [n.d.]). Their confidence in the future is most noticeable in projections of new courses and curricula. As an example, for the next five years Maryland community colleges are proposing 244 new

occupational programs in contrast to the 11 new programs projected for the liberal arts or transfer (Maryland State Board for Community Colleges, 1977). They do not seem to be overly concerned that training of large numbers of skilled workers and technicians may lead to the kind of imbalance between supply and demand that has plagued the professional educators.

They are flattered, though apprehensive, that four-year colleges and universities are showing greater interest in two-year occupational courses and programs. Some are granting advanced standing to graduates of occupational programs and many are adding two-year programs to their curricula (Rinehart, 1973). The danger community college educators see in these developments lies in two directions: 1) loss of enrollment through the competition, and 2) the possible upgrading of occupational programs to baccalaureate level, thereby transforming them into transfer programs, as has happened to other occupational programs (Jacobson, 1977a).

Educators in the liberal arts, humanities, general education are skittish, fearful that the higher favor enjoyed by vocational education will mean the slighting of their disciplines. Faculty in the liberal arts, humanities and general education who stand to lose the most in the shift to vocationalism, see their once popular classes fading--in some areas, such as foreign languages and literature, almost to the vanishing point. But they are incapable of countering the attrition. Parker, who has observed this change through his annual enrollment surveys warns:

> "The oscillating pendulum of educational public opinion,...has swung, or may swing, too far from the academic base of the liberal arts. Indeed, the caution flags should be out against an educational course that leads to a continual restriction of the liberal arts and general education courses so that career education programs, while apparently being broadened in their vocational scope, are in effect being narrowed into overly specialized career education channels" (1974b, p. 463).

Conferees at the American Association for Higher Education meeting

in March 1977, viewed "the process [(of vocational orientation shaping curricular plans) as] full of dangerous implications for general education and for academe's traditional focus on liberal learning" (Jacobson, 1977b, p. 3).

Most of this concern about vocationalism becoming the wave of the future comes from the senior college and university educators ("Is Vocational Education the Wave of the Future?", 1975); there is considerably less concern among community college administrators. As subscribers to the marketplace as the determinant for curricular offerings they accept vocationlism today as a response to community needs just as yesterday they accepted transfer education, and tomorrow they will accept community education. For them the major criterion is need, as expressed by enrollment.

While the debate goes on over the blessings or dire consequences of vocationalism, accommodation is taking place reminiscent of that which took place shortly after the sciences were introduced into the curriculum. "The issue," according to Ensign, "is whether seemingly bipolar content areas can incorporate their combined strengths into the educational process" ("Is Vocational Education the Wave of the Future?", 1975, p. 47). Van Aalst suggests that "liberal arts need to adjust to new vocational realities and take responsibility for a larger segment of the population" ("Is Vocational Education the Wave of the Future?", 1975, p. 47). According to Noojin Walker, vice president of Pensacola Junior College, "career education does not dictate a movement away from the curriculum of traditional liberal education or of...general education.... But [it] does require [relating] man's cultural and humanistic advancement to his work--to the occupations of the disciplines" (Jacobson, 1977b, p. 3).

Occupational education has always enjoyed the support of business, industry and the state and national governments. Today it is receiving attention, if not approbation, from the higher education community. It may be too early to hope on the limited basis of occupational transfers that the dichotomy which has existed between academic and

occupational education will disappear. It may also be utopian to believe that the "social hierarchy of occupations" and our proneness "to rate...occupations on the basis of an intangible scale which tells us that one occupation [or profession] is better than another" have disappeared (Barlow, 1962, p. 11). As Harris points out: "Call it what you will--technical education, career education, occupational education.... House it in modern laboratories. Point to excellent job opportunities.... Promote it on national television--the status gap is still there" (1973, p. ix). Notwithstanding, the various factors that account for the enrollment surge point to a greatly improved status for occupational education in the community college, "now at last recognized as a major function of most two-year colleges" (Harris, 1973, p. vii).

Conclusion

What about the next five years? Obviously, the high growth rates experienced since 1964 cannot be sustained indefinitely. Unless the community college becomes primarily a vocational-technical post-secondary institution the occupational enrollments in the credit programs will probably hover around 50 percent of the total enrollment. If the adult and noncredit occupational students are included in the count the enrollments could go to 70 percent.

As noted above Parker reported 58 percent in 1973-74 and 57 percent in 1974-75. In the comprehensive community colleges the credit occupational enrollments are more likely to approximate 40 percent of the total enrollment. In the eight states in Table 1 the range is from 28 percent for Florida to 59 percent for Massachusetts. Of the other states only Hawaii, Iowa and Nevada have more than 40 percent. Nevada reached a high of 62 percent in 1973 but fell back to 43 percent by 1976. Florida's 28 percent for 1975 is low, because the noncredit and adult vocational education enrollments are not included. Other states with high percentages are California, 60 percent in 1977; Virginia, 51 percent in 1975; and North Carolina,

82 percent in 1974, a figure that would be much lower if the enrollments in the technical institutes were excluded (Shearon and Others, 1976).

Were it not for the transfer of adult and vocational functions to the community college and the inclusion of enrollments of technical and vocational institutes in the state and national figures the disparity between occupational and transfer enrollment would not be so large. On the other hand, the increasing number of occupational programs being offered by four-year colleges and universities favors transfer education. At these institutions occupational program graduates are likely to get advanced credit for many of their courses--which probably contain a large percentage of lower division liberal arts and science courses. Illustrative of a trend is the growth of transfers from the North Carolina technical institutes from 106 in 1971 to 189 in 1973 (North Carolina State Board of Education, 1974).

The enrollment increase in occupational education programs does not mean the end of the liberal arts in the community colleges. Students have not given up their aspirations for baccalaureate and higher degrees. Many students while pursuing two-year occupational programs continue to enroll in the liberal arts transfer courses in the hope that these courses will be useful later. More important, educators, in their effort to make occupational programs more attractive to students and more acceptable to senior colleges include liberal arts, humanities and general education courses.

Until very recently transfer enrollment had not declined. In fact, though the growth rate has been lower than that for occupational enrollment in the credit programs transfer enrollment still exceeds occupational enrollment in many states, in Florida by 105 thousand to 47 thousand (1975); in Mississippi by 20 thousand to 15 thousand (1975-76) and in Hawaii by 10 thousand to 9 thousand (1976). Semester or student credit hour enrollment in the transfer courses tops enrollment in occupational courses by a wide margin.

For example, in Florida in 1975-76 enrollment in advanced and professional courses totalled 2.846 million semester hours, in occupational courses the total was 1.559 million (Florida State Department of Education, 1977). In Hawaii for the Fall of 1974 enrollment in general education totalled 121 thousand credit hours against 56 thousand in occupational education (University of Hawaii, 1975b). Comparable figures for Illinois during 1972-73 were 2.1 million versus .94 million (Illinois Public Community Colleges, [1974]). This record is noteworthy when one considers the decline that occurred in such courses as American history, American government, foreign languages after states, colleges and/or universities dropped them as graduation requirements.

The balance is likely to tip toward transfer enrollment when the number of graduates in vocational education grows so large as to create the kind of dislocation between graduates and jobs that has existed for some time in areas associated with graduates of four-year colleges and universities. In which case, according to Freeman's (1976) cobweb model enrollment will decline because of the low prospects for jobs in overcrowded occupational fields. Conversely, the transfer programs will become more attractive as fewer graduates in professional areas reduce the competition for jobs in those areas.

Moreover, there is some skepticism "that vocational education can do much to help solve high youth unemployment" ("Voc Ed Does Little To Solve Youth Unemployment: Hirsch," 1977, p. 586). Wirtz calls attention to the emergence of a sterner truth: "There is not today and will not be as long as we stay on our present course enough employment to absorb all the young people whose training was based on the prospect of a particular kind of employment" (1977, p. 269). He warned that "talk about jobs we say are there when they are not [comes] very close in the 1970s to playing...a shell game" (1977, p. 275).

That an imbalance between occupational education and jobs is a possibility was also reflected in Farmer's statement: "Fewer rather

than more graduates with certain skills may be better for a period of time to make it possible for those already possessing the skills to be employed" (1973, p. 82). The heightened efforts on articulation among the segments of education and on coordination among colleges in a region or a state are directed toward attaining "a better balance between the outputs of education and the requirements of the economy" (Finch, 1973, p. 8).

Countering these warnings are reports of occupational educators that the great majority of their graduates "sometimes as high as 96 or 97 percent" are placed in jobs (Jacobson, 1977a, p. 3).

While the ascendancy of the occupational function will persist for the future it would be a serious mistake for the community college to adopt a policy of benign neglect of the transfer function or to counsel students not to enter transfer programs on the basis of job market conditions or worse on the basis of socioeconomic or cultural status. No better strategy could be devised to ensure that few of the community college students will be prepared for the positions requiring more than a certificate or associate in arts degree. The glut of educated people in the labor market is a serious problem for all of education. However, the unemployment problem is not peculiar to educated people. Despite the concern for the overeducated Americans their unemployment is considerably less severe than that of the uneducated.

Vocationalism is not the greatest danger to the transfer function. Actually, the number of transfer majors who make the transition to upper division is not much smaller than it was in the heyday of transfer education. Now, as in pre-1960s, not more than 25 percent of those who profess the transfer goal achieve it. So this should not be a cause for alarm. It is a characteristic of an institution that caters to a broad spectrum of the population, including the great majority in the lower socioeconomic groups who attend college. A higher proportion of transfers might very well indicate that the community college is failing to attract large segments of people

from the lower socioeconomic group.

As was pointed out above in terms of the courses that comprise the transfer curricula the number of students enrolled in liberal arts, general education, humanities as measured by student credit hours far outnumber the students enrolled in occupational courses. Moreover, occupational education majors contribute a sizable share of these student credit hours. And as the prestige of the occupations has risen occupational majors have included more liberal arts courses in their programs. As in Eells' time occupational education in the community college "suggests or ought to suggest more than mere occupational training.... [It] implies more than mere training for a job, important as that is. It implies a certain amount of general cultural education to make a [person] a fit member of his...group and of the society of which it is a part" (Eells, 1941b, p. 7).

The danger to the transfer function lies more in the growth of the community education movement than in the growth of occupational education. If in the interest of the greater enrollments the colleges concentrate their efforts on courses, activities, programs that have little or no currency in higher education students with aspirations beyond mere attendance will seek their education elsewhere. Instead of comprehensive community colleges the institutions will be catchall organizations for those unable or not caring for a formal education in the much maligned traditional format.

Americans may be overeducated, but this will not deter many from seeking a formal education. Despite anti-intellectualism there is little evidence to suggest that the uneducated will be preferred to the educated. Moreover, it is important, if the community college is to make possible the upward mobility of the disadvantaged to offer them transfer and occupational programs to achieve that objective. Community education programs are fine for those who want entertainment, hobby and self-improvement activities to fill their spare time, but these are not likely to help the disadvantaged in their efforts to get out of the depressed condition in which they find

themselves. They need not a modern Chautauqua; they need a formal education leading to the certificate or degree required in so many occupations, blue collar, white collar or professional.

In the community college today's balance between occupational and transfer programs is realistic in terms of the aptitude and economic status of students and in the light of society's efforts to conserve resources by differentiating functions among its higher education institutions. A case can be made that through occupational programs the community college will foster more upward mobility than has been true in the past. The occupational programs may be the more viable first step toward upward mobility for those who cannot afford the long nonproductive time the four to six year collegiate programs entail. In the process of obtaining a technical or semiprofessional skill the individual is also exposed to liberal arts or general education offerings. It is difficult to escape the conclusion that this college experience will help achieve upward mobility especially in the light of research which shows that children of college-educated parents are more likely to attend college than children of non-college-educated parents and that there exists a direct relation between the educational attainments of parents and students (Bowen, 1977).

The ups and downs of enrollments in courses and programs are part of the rhythm of education. Transfer education has probably reached its low and occupational education its high. There is, however, little likelihood that transfer education will regain the ascendancy it held up to the 1960s. The societal and cultural values that Medsker mentioned as contributing to the low status of occupational education in the pre-1960 era seem to be attenuated or no longer potent deterrents to occupational enrollment. For the next five years enrollments in vocational education will at least equal enrollments in transfer education. Enrollments in both of them however may be lower than enrollments in community, adult and developmental education.

BIBLIOGRAPHY

American Association of Community and Junior Colleges. 1977 Community, Junior, and Technical College Directory. Washington, D.C., 1977.

American Association of Community and Junior Colleges. 1976 Community, Junior, and Technical College Directory. Washington, D.C., 1976.

Anderson, E.F., and Spencer, J.S. Report of Selected Data and Characteristics, Illinois Public Junior Colleges, 1967-68. Springfield: Illinois Junior College Board, 1968. 94pp. ED 019 946.

Barlow, M.L. "Vocational Education in the Fabulous Future." American Vocational Journal, 37 (7): 9-11, 31; October 1962.

Bathune, S. "Retooling the College Graduate." Community College Review, 4 (4): 36-40; Spring 1977.

Bogue, J.P. The Community College. First Edition. New York: McGraw-Hill Book Co., 1950.

Bowen, H.R. "The Effects of Going to College." The Chronicle of Higher Education, 15 (9): 3-4; October 31, 1977.

Bushnell, D.S. Organizing for Change: New Priorities for Community Colleges. New York: McGraw-Hill Book Co., 1973.

California Community Colleges. California Community College Students: A Brief Profile of Those Enrolled, Particularly in Vocational Education. Sacramento, Calif.: Office of the Chancellor, Analytical Studies Unit, 1977.

Career Information Center. Post-High School Occupational Training Opportunities in Hawaii Public Institutions, 1974-1975. Honolulu, Hawaii, pamphlet, [1974].

Davenport, L.F., and Others. Vocational Education in the 1980's. Papers presented at the Annual Meeting of the American Association of Community and Junior Colleges, Washington, D.C., March 17-19, 1976. 41pp. ED 124 249.

Dobrovolny, J.S., and Stark, R.L. An Evaluation of the Program Approval Process in Illinois Community Colleges. Champaign, Ill.: Midwest Educational Research Evaluation and Training Center, 1975. 37pp. ED 120 580.

Donnelly, C. Personal Communication. Reno: University of Nevada System, Community College Division, Office of the Director, March 23, 1977.

Drake, S. "The Data/Some Interpretations." In 1976 Community, Junior, and Technical College Directory. Washington, D.C.: American Association of Community and Junior Colleges, 1976.

Eells, W.C. Present Status of Junior College Terminal Education. Washington, D.C.: American Association of Junior Colleges, 1941a.

Eells, W.C. Why Junior College Terminal Education? Washington, D.C.: American Association of Junior Colleges, 1941b.

Eissler, R.K. Personal Communication. Sacramento: California State Department of Education, Vocational Field Operations, Office of Fiscal/Statistical Management, March 8, 1977.

Engleman, L.E., and Eells, W.C. The Literature of Junior College Terminal Education. Washington, D.C.: American Association of Junior Colleges, 1941.

Farmer, J.A., Jr. "Assisting Significant Others to Appreciate Technical/Vocational Education in Community Colleges." New Directions for Community Colleges: Updating Occupational Education, 1 (4): 81-92; Winter 1973.

Finch, H.L. "A State Educational and Manpower Forecasting Model for Community College Planners." New Directions for Community Colleges: Updating Occupational Education, 1 (4): 7-18; Winter 1973.

Florida State Department of Education. Report for Florida Community Colleges, 1975-76. Tallahassee, Fla.: Division of Community Junior Colleges, 1977. 167pp. ED 135 430.

Florida State Department of Education. Report for Florida's Public Community Colleges, 1970-71. Tallahassee, Fla.: Division of Community Junior Colleges, 1972. 87pp. ED 061 937.

Freeman, R.B. The Overeducated American. New York: Academic Press, 1976.

Gold, B.K. Trends in Los Angeles City College Day Course Enrollments, 1970-1974. Research Study No. 75-1. Los Angeles: Los Angeles City College, 1975. 40pp. ED 100 419.

Gold, B.K., and Morris, W. Student Accountability Model (SAM): Operations Manual. Sacramento: California Community Colleges; and Los Angeles: Los Angeles Community College District, 1977. 99pp. ED 135 443.

Harris, N.C. "Editor's Notes." New Directions for Community Colleges: Updating Occupational Education, 1 (4), vii-x; Winter 1973.

Illinois Community College Board. Curriculum Enrollment Summary in the Public Community Colleges of Illinois: 1975-76. Springfield, Ill., 1976a.

Illinois Community College Board. "Greatest Student Enrollment Increase in Career/Occupational Oriented Program Area." Illinois Community College Bulletin, 11 (3): 5; November-December 1976b.

Illinois Community College Board. "Selected Data of Illinois Public Community Colleges." Illinois Community College Bulletin, 11 (2): 4; September-October 1976c.

Illinois Junior College Board. Report of Selected Data and Characteristics of Illinois Public Junior Colleges, 1970-1971. Springfield, Ill., 1971. 109pp. ED 101 794.

Illinois Public Community Colleges. The New Colleges in Illinois. Springfield, Ill., [1974].

Iowa State Department of Public Instruction. Opportunities in Iowa's Area Schools, 1976-77. Des Moines, Iowa, [1976]. 119pp. ED 138 323.

"Is Vocational Education the Wave of the Future?" Change, 7 (9): 46-48; November 1975.

Jacobson, R.L. "Colleges Try to Move In on Vocational Education." The Chronicle of Higher Education, 15 (12): 3-4; November 21, 1977a.

Jacobson, R.L. "Higher Education and the Job Crisis: Public Disillusionment Provokes a Debate." The Chronicle of Higher Education, 14 (5): 3; March 28, 1977b.

Larkin, P.G. Five-Year Trends in Career Program Graduations, 1970-1974. [Prince George's Community College, Maryland]. Report No. 76. Largo, Md.: Prince George's Community College, 1974a. 8pp. ED 099 073.

Larkin, P.G. Five Years of Career Program Growth: 1969-1973. [Prince George's Community College, Maryland]. Report No. 75. Largo, Md.: Prince George's Community College, 1974b. 7pp. ED 099 072.

Lee, R. "Reverse Transfer Students." Community College Review, 4 (2): 64-70; Fall 1976.

Lombardi, J. Noncampus Colleges: New Governance Patterns for Outreach Programs. Topical Paper No. 60. Los Angeles: ERIC Clearinghouse for Junior Colleges, 1977. 80pp. ED 136 880.

Lombardi, J. Riding the Wave of New Enrollments. Topical Paper No. 50. Los Angeles: ERIC Clearinghouse for Junior Colleges, 1975. 58pp. ED 107 326.

Los Angeles Community College District. An Analysis of LACCD Enrollment Trends. Los Angeles: Division of Educational Planning and Development, 1977.

Macomb County Community College (Michigan). Information Report: Enrollment, 1972-73. Prepared for meeting of Board of Trustees, Warren, Michigan, March 20, 1973.

Maryland State Board for Community Colleges. Statewide Master Plan for Community Colleges in Maryland, Fiscal Years 1978-1987. Annapolis, Md., 1977. 227pp. ED 139 454.

Matrix for Planning. Belmont, Mass.: Dober and Associates, Inc., 1975. 71pp. ED 125 677.

Medsker, L.L. The Junior College: Progress and Prospect. New York: McGraw-Hill Book Co., 1960.

Milwaukee Area Technical College (Wisconsin). Council for Occupational Education. Milwaukee, Wis., pamphlet, [n.d.].

Mississippi State Department of Education. Mississippi Public Junior Colleges Statistical Data, 1974-75. Jackson, Miss.: Division of Junior Colleges, 1975. 30pp. ED 125 676.

Monroe, C.R. Profile of the Community College. San Francisco: Jossey-Bass, Inc., 1972.

North Carolina State Board of Education. North Carolina Community College System Biennial Report, 1972-1974. Raleigh, N.C.: Department of Community Colleges, 1974. 126pp. ED 107 337.

Oregon State Department of Education. Community College Statistical and Enrollment Tables. Salem, Ore.: Community College Division, 1977.

Parker, G.G. Career Education and Transfer Program Enrollments in 2-Year Colleges, 1973-74. ACT Special Report 11. Iowa City, Iowa: American College Testing Program, 1974a. 44pp. ED 103 031.

Parker, G.G. Collegiate Enrollees in American 2-Year Institutions, 1974-75: Statistics, Interpretations, and Trends. ACT Special Report 14. Iowa City, Iowa: American College Testing Program, 1975. 52pp. ED 114 130.

Parker, G.G. "Enrollments in American Two-Year Colleges, 1973-74: Statistics, Interpretation, and Trends." Intellect, 102 (2357): 460-473; April 1974b.

Phair, T.S. Staffing Patterns in Public California Community Colleges, a 1976-77 Overview. Sacramento: California Community and Junior College Association, 1977. 22pp. ED 135 433.

Price, E.F. Personal Communication. Olympia: Washington State Board for Community College Education, Office of the Associate Director, November 3, 1977.

Rinehart, R.L. "Articulating Career Education at Associate-Degree and Baccalaureate-Degree Levels." New Directions for Community Colleges: Updating Occupational Education, 1 (4): 93-103; Winter 1973.

Shearon, R.W., and Others. Profile of Students in North Carolina Community Colleges and Technical Institutes. Volume I--Technical Report [and] A Summary of Research Findings. Raleigh: North Carolina State University, Department of Adult and Community

College Education, 1976. 379pp. ED 136 846.

Smith, R.B. Do Curriculums Reflect Purposes? Unpublished paper, [1969]. 15pp. ED 038 972. Available in microfiche only.

Starrak, J.A., and Hughes, R.M. The New Junior College; The Next Step in Free Public Education. Ames: Iowa State College Press, 1948.

Trivett, D.A. "The Ph.D. Job Crisis." College and University Bulletin, 30 (2): 3-6; October 1977.

University of Hawaii. Academic Crossover Report: Community Colleges, Fall 1975. Honolulu, Hawaii: Community College System, 1975a. 8pp. ED 115 338.

University of Hawaii. Academic Crossover Report: Community Colleges, Fall 1974. Honolulu, Hawaii: Community College System, 1975b. 42pp. ED 100 470.

University of Hawaii. Hawaii's Community Colleges: A Few Facts. Honolulu, Hawaii: Community College System, 1974.

University of Hawaii. Selected Characteristics, Classified and Unclassified (Regular) Students, Community Colleges, Fall 1976. Honolulu, Hawaii: Community College System, 1976. 18pp. ED 130 736.

U.S. Department of Health, Education and Welfare. Trends in Vocational Education Fiscal Year 1974. Washington, D.C., 1975.

Virginia State General Assembly. Program Evaluation: The Virginia Community College System. Richmond, Va.: Joint Legislative Audit and Review Commission, 1975. 368pp. ED 136 874.

"Voc Ed Does Little To Solve Youth Unemployment: Hirsch." Phi Delta Kappan, 58 (7): 586; March 1977.

Ward, P. "Development of the Junior College Movement." In J.P. Bogue (Ed.) American Junior Colleges. Second Edition. Washington, D.C.: American Council on Education, 1948.

Washington State Board for Community College Education. Final Quarterly Enrollments, Academic Year 1974-75. Operations Report No. 12. Olympia, Wash., 1975. 29pp. ED 115 329.

Wirtz, W. "Education for What?" In D.W. Vermilye (Ed.) Relating Work and Education. San Francisco: Jossey-Bass, Inc., 1977.

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